In the embodiments above, reference has been made to the OpenGL standard, but any other suitable standard, such as VRML, may be used.

In the embodiments above, the viewing camera is defined for each separate 3D computer model of a single subject object 210. However, having generated data defining a 3D computer model of a subject object at step S4-38, the 3D computer model may be transformed in a conventional manner into a 3D space containing one or more other 3D computer models of different subject objects. A viewing camera may then be defined for the 3D space containing the plurality of 3D computer models of subject objects at step S4-40, and the data defining the common 3D space with the different 3D computer models of the subject objects therein may be made available at step S4-42. By way of example, processing apparatus 6 may generate data defining a 3D computer model of a set of shelves and each 3D computer model of a subject object may be transformed to a position on a shelf. In this scenario, the techniques described above to enable a user at customer processing apparatus 2, 4 to orientate the subject object 210 so that the desired part is visible in the first image of the 3D computer model are especially important so that the desired part faces the viewing camera with

which the first image of the 3D computer model of the shelves and subject objects is generated each time it is accessed.

In the embodiments above, processing apparatus 6 sends instructions to a customer processing apparatus 2, 4 to print or display a photographic mat, and receives images from a customer processing apparatus 2, 4 for processing. However, a printer or display panel may be connected directly to processing apparatus 6 for the printing/display of a photographic mat and recorded images may be input to processing apparatus 6 using a camera connected directly thereto.

In the embodiments described above, mat data generator 38 in processing apparatus 6 sends instructions to a customer processing apparatus 2, 4 to control a printer 18 or display 14 to print or display a photographic mat. However, instead, preprinted photographic mats having calibration patterns thereon defined in data prestored in calibration pattern store 37 may be distributed (for example by post) to the users of the customer processing apparatus 2, 4, so that it is unnecessary to print or display a photographic mat at the customer processing apparatus.

In the embodiments above, processing is performed by camera position and orientation calculator 40 to calculate the intrinsic parameters of the camera 16 which was used to record images of the photographic mat and subject object. However, instead, the intrinsic parameters may be transmitted from the customer computer processing apparatus 2, 4 to processing apparatus 6 or, default values may be assumed for some, or all, of the intrinsic camera parameters.

In the embodiment above, each camera 16 is a digital camera connected to a customer processing apparatus. However, each camera 16 may be separate from a customer processing apparatus and may transfer data thereto via a memory device or a temporary connection etc. Further, images of the photographic mat and subject object may be recorded using a conventional film camera, and a scanner connected to the customer computer processing apparatus may be used to scan photographs to generate digital image data for transmission to processing apparatus 6.

In the embodiments above, the customer computer processing apparatus 2, 4 to which photographic mat print or display instructions are sent by processing apparatus 6 is also the customer processing apparatus to which